

- The new alignment construction should not directly affect existing communities. The most likely negative impacts will be associated with increased traffic (and possibly speeds) through existing neighborhoods along Franklin Boulevard and Florida Street.

Elm-Eugene Street (B5)

- Widening: Vandalia Road to Southern Urban Loop (I-85 Bypass).
- Widening of Elm-Eugene Street could encroach on properties in the minority community in the Wynnmore neighborhood and surrounding area. Traffic speeds and volumes could increase.

Vandalia Road (B12)

- Widening: Elm-Eugene St. to Pleasant Garden Rd.
- The widening of Vandalia Road through a minority community in the vicinity of the Woodlea Lakes neighborhood could affect driveways and front yards, and increase traffic volumes and speeds.

East Market Street (B32)

- Widening, streetscape, and traffic management.
- East Market Street passes through minority and low-income communities in the East Market Street and Cumberland neighborhood vicinities. There is a possibility for encroachment issues in these communities.
- This project should have significant aesthetic benefits, and will improve the safety and attractiveness of walking, biking, and transit use.

East Cone Boulevard Extension (B39)

- Extension on new location: Nealtown Road to Hines Chapel Road.
- The extension between 16th Street and Brame Road could affect minority communities in this vicinity. Being on new, relatively open alignment minimizes or eliminates most impacts due to encroachment or relocation.
- The project will provide better access and alternative travel routes, and should increase investment opportunities.

- Construction could have negative impacts on specific properties.

Holts Chapel Road Upgrade (B41)

- Alignment and cross-section improvements: East Market Street to Ward Road.
- Widening/realignment on Holts Chapel Road passes through minority and low-income communities in the vicinity of the Heath, Hope Valley, Sharing Trace, and Franklin Blvd./Shirley Lane neighborhoods.
- A short segment on new location between Lowdermilk Street and Franklin Boulevard passes through a minority/low-income community, with associated encroachment impacts possible.
- Overall, project should improve accessibility and safety, with some increase in traffic volumes (and possibly, speeds).

Alamance Church Road (B45)

- Widening: US 421 to southeast of Southeast School Road.
- The widening between Cyrus Road and Rotherwood Road passes through the Rotherwood and Wilpar Estates neighborhoods. Encroachment impacts are likely in these communities.
- Overall, this project should improve accessibility and safety, accompanied by some increase in traffic volumes (and possibly, speeds).

Roadway Projects — 2020 Horizon Year

Eastern Urban Loop (C7)

- Freeway on new location.
- The alignment between Burlington Road and Hines Chapel Road passes close to minority communities in the area. Both construction and traffic noise could be disruptive.
- This project will significantly improve accessibility.

Vandalia Road Extension (C18)

- Primarily on new location: Pleasant Garden Road to Alamance Church Road, with interchange at US 421.

- The road extension between Riverdale Road and Alamance Church Road passes near minority communities in this area. A portion of the necessary right-of-way has been acquired.
- The project should improve accessibility for the community, but construction and higher traffic volumes will affect specific properties. Traffic speeds could possibly increase, as well.

Roadway Projects — 2030 Horizon Year

Penry/Ward/Youngs Mill Connector (D3)

- Widening, realignment, and connector on new location, plus new railroad grade separation, and possible interchange at US 70: McConnell Road to Huffine Mill Road.
- This project potentially affects minority communities in the Callum area, although the portions on new alignment run through relatively undeveloped land. Specific structures, driveways, front yards, etc. could be affected. Traffic volumes will increase on existing roads along the proposed route.
- The project will improve safety and provide better access and alternative travel routes, and should increase investment opportunities.
- Since this project includes both widening and new construction, impacts can vary significantly, depending on the type of work being done in proximity to the area in question. For new construction, impacts are highly dependent on the final alignment and design.

Rankin Mill/Flemingfield Connector (D10)

- Realignment and extension on new location: South of Keeley Road to Huffine Mill Road.
- The relocation could impact minority and low-income communities along Flemingfield Road, and possibly Rankin Mill Road. Construction-related impacts are possible, but are highly dependent on the final alignment and design.
- This project will provide better access and alternative travel routes.

Nealtown Rd/McKnight Mill Road Connector and Extension (D24)

- Extension/connection on new location: Huffine Mill Road to Eckerson Road.

- This project could have impacts on minority communities in the vicinity of the Callum, Glendale Mills, and Nealtown Farms neighborhoods.
- The project should improve accessibility and provide alternative travel routes, but specific properties could be affected by construction and by increased traffic volumes.
- Since the project includes both widening and construction on new alignment, impacts could vary significantly, depending on the type of work being done in proximity to the area in question. For new construction, impacts are highly dependent on the final alignment and design.

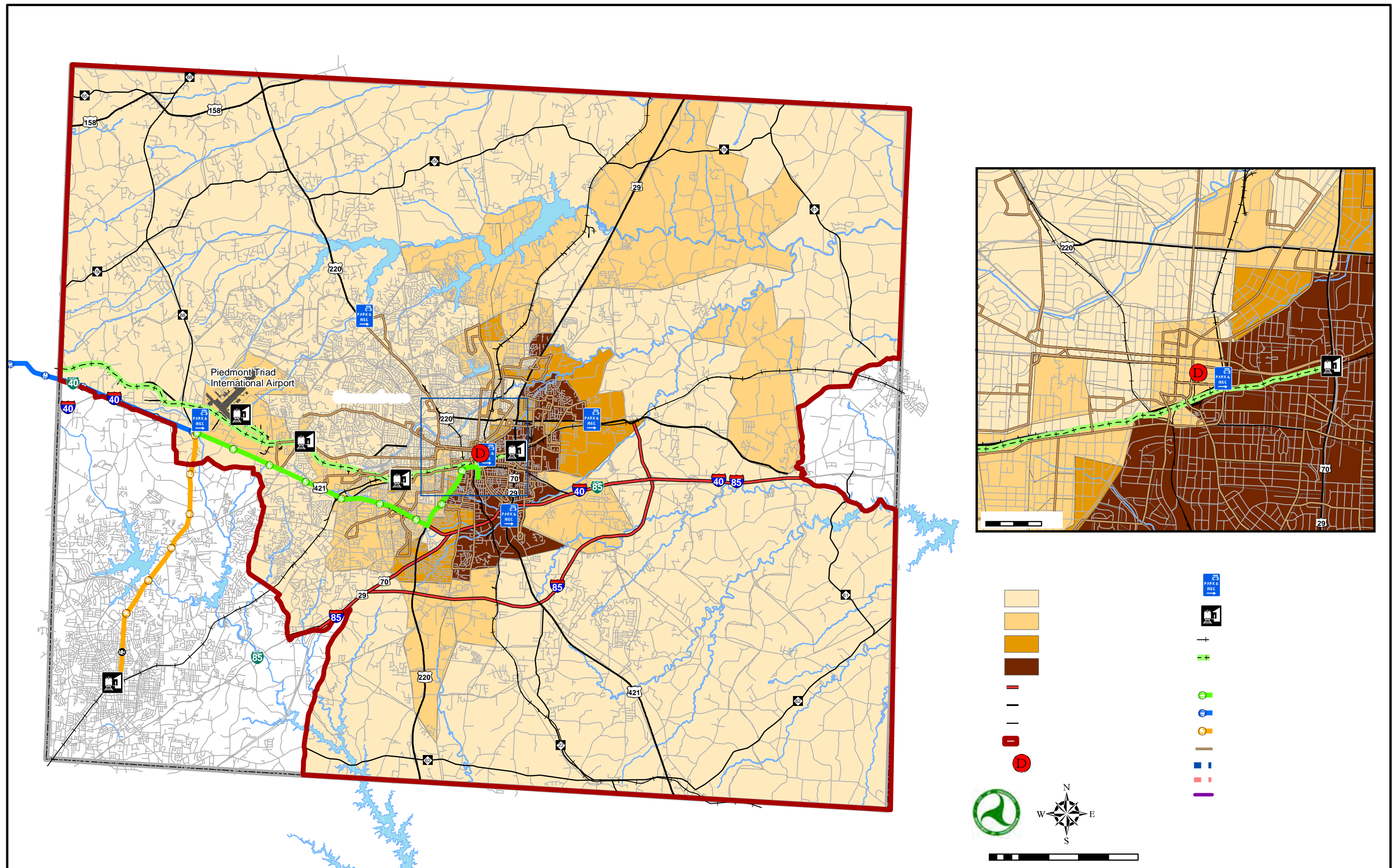
Florida Street Extension (D29)

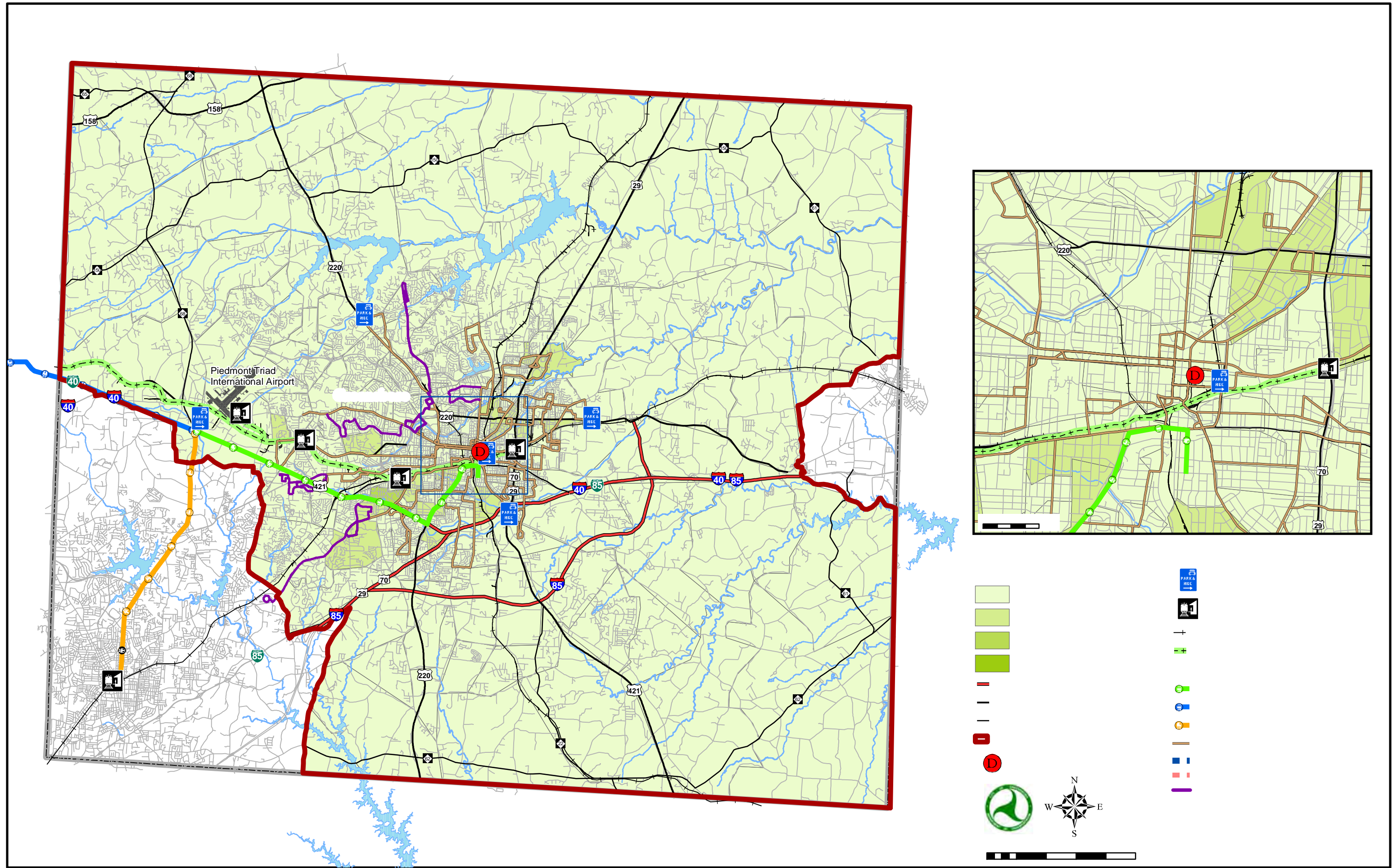
- Extension on new location: Franklin Boulevard Extension to McLeansville Road.
- The Florida Street extension passes through areas containing minority communities, and is near a low-income community. However, the proposed corridor is relatively free from development, except in the vicinity of McConnell Road.
- The project will provide better access and alternative travel routes, and should enhance investment opportunities, but could have negative impacts (associated with construction and increased traffic) on specific properties. Impacts are highly dependent on the final alignment and design.

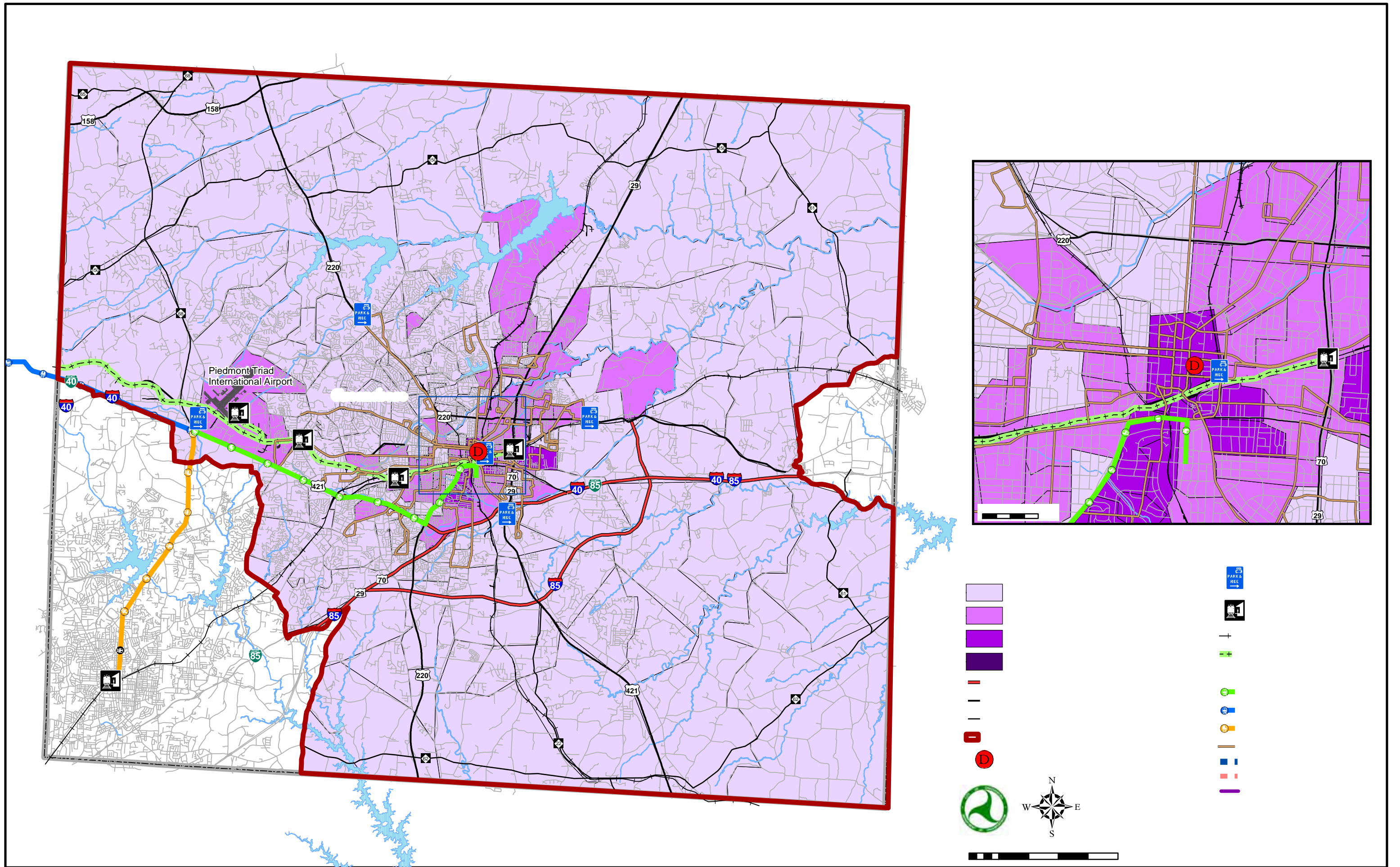
Transit Projects

The transit element of the transportation plan has special relevance with regard to environmental justice. Minority and low-income populations often depend heavily on modes other than the automobile for access to jobs, goods, and services. Therefore, roadway improvements alone cannot be assumed to correlate with improved transportation. The maintenance and enhancement of transit service in minority and low-income communities is an important aspect of environmental justice.

Maps 4.6, 4.7, and 4.8 superimpose transit service expansions and improvements on the same minority and low-income population distribution maps used earlier for assessing roadway projects. Service enhancements of particular benefit to minority and low-income communities are listed below.







Short-Range Service Plan

- Cross-Town Routes
 - Florida Street
 - Cone Boulevard
- Connectors
 - Vandalia Road
 - GTCC/Penry Road

Long-Range Service Plan

- Cross-Town Routes
 - Vandalia Road
 - Pisgah Church Road
- Connectors
 - Lake Jeannette Road
- Regional Service
 - Rapid bus
 - Regional rail

Other Modes and Projects

- The transportation plan identifies policies and projects designed to enhance the convenience and safety of pedestrians and bicyclists. These elements of the transportation plan will benefit minority and low-income populations by increasing the attractiveness of these non-motorized travel modes, as well as improving and expanding access to transit service.
- The East Market Street streetscape project provides benefits to populations that are primarily minority or low-income.

Thoroughfare and Collector Street Planning

Introduction

The planning process for the Greensboro Urban Area Long Range Transportation Plan (LRTP) included a review and update to the urban area's existing Thoroughfare Plan and the development of a *draft* Collector Street Plan. The Thoroughfare Plan has been carefully prepared to provide safe, efficient and convenient movement of vehicles into, out of, and thorough the urban area. The Thoroughfare Plan also represents an unconstrained set of future thoroughfare needs. The first Thoroughfare Plan for the urban area was adopted in 1954 and numerous adopted versions followed. The current Thoroughfare Plan was adopted July 1996 and has been amended five times since, in response to needs in the urban area.

Unlike the Thoroughfare Plan, the Collector Street Plan is a new element of the LRTP. The City of Greensboro has established and maintained a database of existing collector streets within the City limits. The MPO has recently acknowledged, however, the need to plan a series of interconnected collector streets throughout the entire urban area. The MPO worked cooperatively with the LRTP Technical Committee, to develop a *Draft* Collector Street Plan. The results of these planning efforts are described in the following section.

Thoroughfare Plan

The Thoroughfare Plan represents existing and proposed major and minor thoroughfare roadways. It also indicates existing and proposed grade separations, and interchanges. It is primarily a planning tool that corresponds with local development ordinance requirements for right-of-way dedication and roadway construction. Setback requirements within these ordinances also ensure that future widening can be achieved without significant impacts to properties, thereby reducing total construction cost. Unlike the LRTP, the plan does not specify the timing of proposed roadway projects nor is it fiscally constrained.

“...145 changes were made to the existing Thoroughfare Plan.”

The Technical Committee undertook the task of revising the current Thoroughfare Plan. The Committee's examination of the current plan revealed a number of projects that needed to be modified, added, or deleted. As a result of the Committee's detailed analysis, the Thoroughfare Plan has been made fully consistent with existing and proposed projects from the LRTP and

includes many other noteworthy additions such as future grade separations, new, existing and proposed major and minor thoroughfares, and proposed interchange locations. In total, there are 145 proposed changes to the existing Thoroughfare Plan, which are listed in **Tables 5.1** and **5.2**. **Map 5.1** depicts the Proposed Thoroughfare Plan. Following the completion of the LRTP, the MPO will review the current thoroughfare design standards for possible revisions in local development ordinances.

In the near future, the Thoroughfare Plan will evolve into a more detailed set of plans that extend beyond the roadway system. Currently, NCDOT is developing specifications for a State-mandated Comprehensive Transportation Plan (CTP). The CTP will replace the thoroughfare plan, which was previously required under North Carolina General Statutes (NCGS). The CTP will consist of a series of map components, accompanied by text documentation. Several of the CTP components have been identified: Highways, Bicycle and Pedestrian Facilities, Public Transportation, and Passenger Rail.

The CTP highway component will classify facilities previously shown on the thoroughfare plan, according to a classification system based on the current and planned access control category of each facility. Traffic analysis data and stakeholder involvement findings will support the classification process. The access control classifications will also be cross-classified with the former thoroughfare plan classifications to clearly indicate how they relate at the corridor level. The CTP will complement the thoroughfare plan and Collector Plan and will be used to fulfill the state mandate of NCGS 136-66.2 for a Highway Needs Plan.

**Table 5.1 — Changes to Roadway Elements in the
Proposed Thoroughfare Plan**

ID No.	ROADWAY	FROM	TO	PREVIOUS CLASSIFICATION	PROPOSED CLASSIFICATION
1	US 158	NC 65	US 158	Local	Existing Minor
2	Goodwill Ch Rd	Haw River Rd	MAB	Local	Existing Minor
4	Beeson Rd	Bunker Hill Rd	NC 150	Local	Existing Minor
5	Bunker Hill Rd	Beeson Rd	Stafford Mill Rd	Minor	Remove Minor
6	Eversfield Rd	US 158 Bypass	Brookbank Rd	Local	Existing Minor
7	Bunch Rd	Brookbank Rd	Pleasant Ridge Rd	Local	Existing Minor
8	Pleasant Ridge Rd	Future NC 150	Summerfield Rd	Local	Existing Major
9	Lake Brandt Rd	NC 150	MAB	Minor	Existing Major
10	Plowfield Rd	Lake Brandt Rd	New Alignment	Local	Existing Minor
11	Plowfield Rd	Plowfield Rd	Church St	Local	Proposed Minor
12	Archergate Rd	Church St	Yanceyville St	Local	Existing Minor
13	Church St	Wendover Ave	MAB	Minor	Existing Major
14	Doggett Rd	Yanceyville St	NC 150	Local	Existing Minor
15	Fairgrove Ch Rd	NC 150	MAB	Local	Remove Minor
16	Brooks Lake Rd	NC 150	MAB	Local	Existing Minor
17	Benaja Rd	Old Reidsville Rd	MAB	Local	Existing Minor
18	Old Reidsville Rd	NC 150	Benaja Rd	Local	Existing Minor
20	Friendship Ch Rd	Hicone Rd	MAB	Local	Existing Minor
21	Osceola-Ossipee Rd	NC 61	MAB	Minor	Existing Major
22	High Rock Rd	Frieden Ch Rd	MAB	Local	Existing Major
23	Sheppard Rd	NC 61	MAB	Local	Existing Minor
24	High Rock Rd	Frieden Ch Rd	Bethel Ch Rd	Roadway Not Present	Proposed Major
25	High Rock Rd	Frieden Ch Rd	Bethel Ch Rd	Local	Existing Major
26	High Rock Rd	Frieden Ch Rd	Bethel Ch Rd	Roadway Not Present	Proposed Major
27	High Rock Rd	Frieden Ch Rd	Bethel Ch Rd	Local	Existing Major
28	High Rock Rd	Frieden Ch Rd	Bethel Ch Rd	Roadway Not Present	Proposed Major
29	Carmon Rd Ext	Carmon Rd	McLeansville Rd	Roadway Not Present	Proposed Minor
30	Bethel Ch Rd	Carmon Rd	Knox Rd	Minor	Existing Minor
31	Knox Rd	Bethel Ch Rd	Frieden Ch Rd	Local	Existing Minor
32	Knox Rd	Bethel Ch Rd	Frieden Ch Rd	Roadway Not Present	Proposed Minor
33	Carmon Rd	Frieden Ch Rd	Railroad	Minor	Remove Minor
34	Flemingfield Rd	US 70	Reedy Fork Pkwy	Local	Existing Minor
35	Flemingfield Rd	US 70	Reedy Fork Pkwy	Roadway Not Present	Proposed Minor
36	Flemingfield Rd	US 70	Reedy Fork Pkwy	Local	Existing Minor
37	Flemingfield Rd	US 70	Reedy Fork Pkwy	Roadway Not Present	Proposed Minor

*Greensboro Urban Area
2030 Long Range Transportation Plan*

ID No.	ROADWAY	FROM	TO	PREVIOUS CLASSIFICATION	PROPOSED CLASSIFICATION
38	Flemingfield Rd	US 70	Reedy Fork Pkwy	Local	Existing Minor
39	Nealtown Rd	Cone Blvd	McKnight Mill Rd	Roadway Not Present	Proposed Minor
40	Ward Rd	Holts Chapel Rd	Youngs Mill Rd	Major	Remove Major
41	JFH Dairy Rd	Holts Chapel Rd	Ward Rd	Major	Remove Major
42	Holts Chapel Rd	Youngs Mill Rd	Mt Hope Ch Rd	Proposed Minor	Remove Minor
43	Florida St Ext	McConnell Rd	Clapp Farm Rd	Roadway Not Present	Proposed Major
44	Youngs Mill Rd Ext	McConnell Rd	Ward Rd	Roadway Not Present	Proposed Major
45	Youngs Mill Rd	Lee St	McConnell Rd	Minor	Existing Major
46	Sharpe Rd	Alamance Ch Rd	Youngs Mill Rd	Local	Existing Minor
47	Causey Lake Rd	Causey Lake Rd	Alamance Ch Rd	Proposed Major	Existing Major
48	Williams Dairy Rd	Camrose Rd	Millpoint Rd	Proposed Minor	Remove Minor
49	Mill Point Rd	Thacker Dairy Rd	Millpoint Rd	Local	Existing Minor
50	Williams Dairy Rd	Camrose Rd	Millpoint Rd	Roadway Not Present	Proposed Minor
51	Wade Store Rd	Alamance Ch Rd	Mt Hope Ch Rd	Local	Existing Minor
52	Rock Creek Rd	Mt Hope Ch Rd	Thacker Dairy Rd	Major	Remove Major
53	Holts Store Rd	Mt Hope Ch Rd	Thacker Dairy Rd	Minor	Existing Major
54	Mt Hope Ch Rd	Rock Creek Dairy Rd	Holts Store Rd	Minor	Existing Major
55	Holts Store Rd	Mt Hope Ch Rd	Connector	Minor	Existing Major
56	Mt Hope Ch Rd	Rock Creek Dairy Rd	McPherson Rd	Local	Existing Major
57	Holts Store Connector	Holts Store Rd	NC 61	Proposed Minor	Proposed Major
58	Shoe Rd	NC 61	MAB	Minor	Existing Major
59	Wheeler Bridge Rd	MAB	Shoe Rd	Roadway Not Present	Existing Minor
60	Kimesville Rd	Alamance Ch Rd	MAB	Roadway Not Present	Existing Minor
61	Smithwood Rd	Coble Ch Rd	Timber River Rd	Roadway Not Present	Existing Minor
62	NC 62 Connector	NC 62	Old Julian Rd	Proposed Major	Remove Major
63	NC 62	NC 62	NC 62	Local	Existing Major
64	Monett Rd	US 421	Company Mill Rd	Local	Existing Minor
65	Liberty Rd	US 421	NC 62	Local	Existing Minor
66	Steeple Chase Rd	Steeple Chase Rd	Hagan Stone Park	Proposed Major	Remove Major
67	Hagan Stone Park Rd	Pleasant Garden Rd	New Alignment	Local	Proposed Major
68	Spur Rd	Alliance Ch Rd	Neelley Rd	Proposed Minor	Remove Minor
69	Vandalia Rd	Vandalia Rd	Vandalia Rd	Proposed Major	Remove Major
70	Vandalia Rd	Vandalia Rd	US 421	Roadway Not Present	Proposed Major
71	Wall Rd	Groometown Rd	Drake Rd	Local	Existing Minor
72	Drake Rd	Kivett Dr	NC 62	Local	Existing Minor
73	Bishop Rd	Groometown Rd	Old Randleman Rd	Local	Existing Minor
74	Bishop-Spur Connector	Bishop Rd	Spur Rd	Proposed Minor	Remove Minor
75	Holden Rd	Holden Rd	Old Randleman Rd	Major	Remove Major
76	Holden Rd	Holden Rd	Old Randleman Rd	Roadway Not Present	Proposed Major

*Greensboro Urban Area
2030 Long Range Transportation Plan*

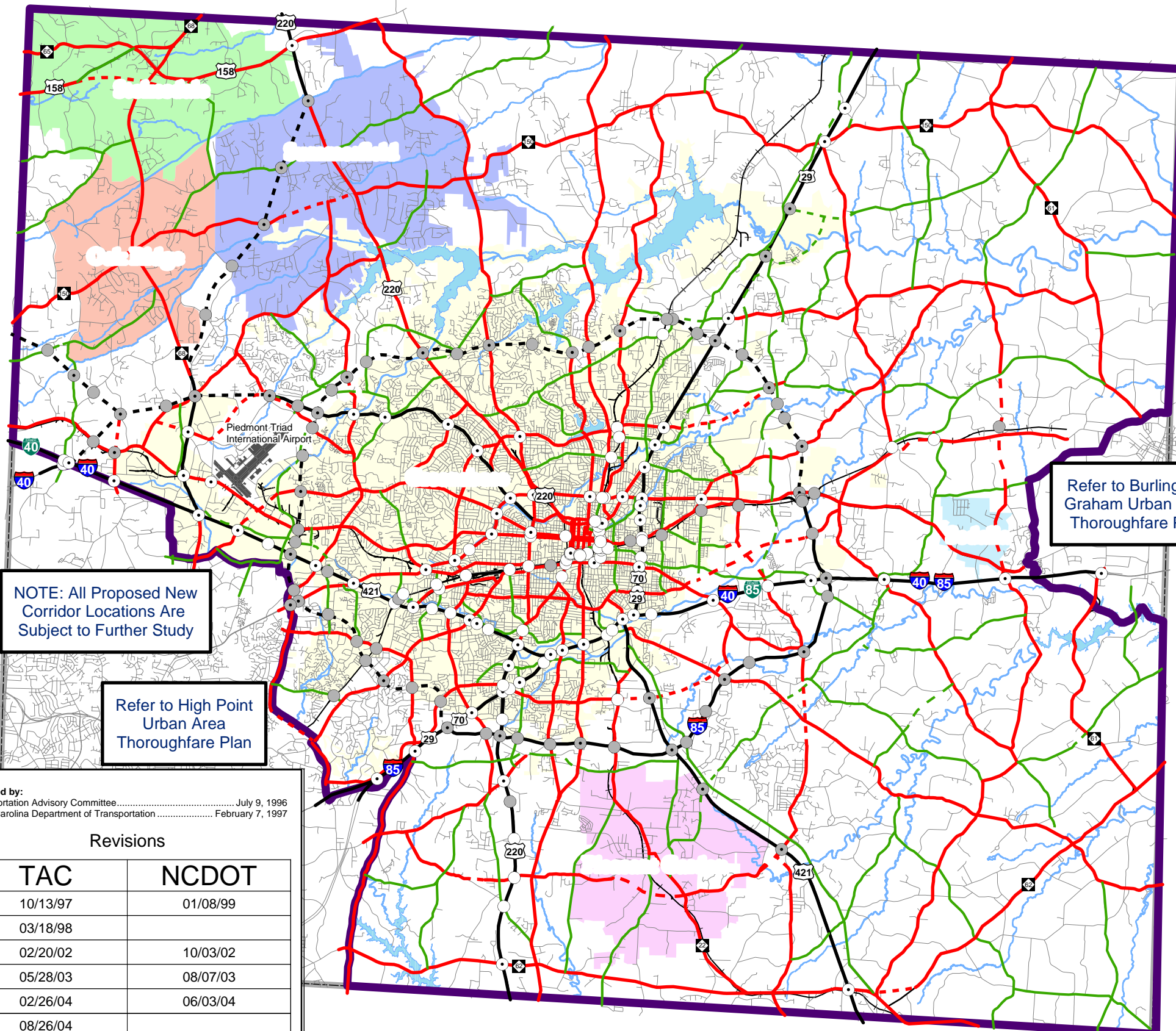
ID No.	ROADWAY	FROM	TO	PREVIOUS CLASSIFICATION	PROPOSED CLASSIFICATION
77	Old Randleman Rd	Wolfetrail Rd	Randleman Rd	Major	Remove Major
78	Ritters Lake Rd	Rehobeth Ch Rd	Randleman Rd	Proposed Minor	Remove Minor
79	Wolfetrail Rd	Old Randleman Rd	Randleman Rd	Local	Existing Major
80	Wolfetrail Rd	Randleman Rd	Elm-Eugene St	Roadway Not Present	Proposed Minor
81	Vandalia Rd	Wiley Davis Rd	Groometown Rd	Major	Remove Major
82	MLK Jr Dr	Elm-Davie	Florida St	Major	Remove Major
83	Spring Garden St	Greene St	Aycock St	Major	Existing Minor
84	Lovett St	Lee St	Freeman Mill Rd	Major	Remove Major
85	Chapman St	Friendly Ave	Lee ST	Minor	Remove Minor
86	Greene St	Lindsay St	Fisher Ave	Local	Existing Major
87	Lindsay St	Elm St	Greene St	Major	Existing Minor
88	Bessemer Ave	Church St	Burlington Rd	Local	Existing Minor
89	Benjamin Pkwy	Bryan Blvd	Aycock St	Freeway	Existing Major
90	Cornwallis Dr	Battleground Ave	Holden Rd	Minor	Remove Minor
91	Pisgah Ch	Battleground Ave	Church St	Minor	Existing Major
92	Lees Chapel Rd	Church St	Hicone Rd	Minor	Existing Major
93	Hicone Rd	Lees Chapel Rd	US 29	Minor	Proposed Major
94	Church St	Lindsay St	Washington St	Local	Existing Minor
95	Lake Jeanette Rd	Lawndale Dr	Elm St	Local	Existing Minor
96	Bass Chapel	Netfield Rd	Air Harbor Rd	Local	Proposed Minor
97	Netfield Rd	Bass Chapel Rd	Air Harbor Rd	Minor	Remove Minor
98	Westridge Rd	Friendly Ave	Battleground Ave	Major	Existing Minor
99	New Garden Rd	Fleming Rd	Battleground Ave	Minor	Existing Major
100	High Point Rd	Roland Rd	Mackay Rd	Roadway Not Present	Proposed Major
101	Stanley Rd	Wendover Ave	Hilltop Rd	Local	Existing Minor
102	Omitted	n/a	n/a	n/a	n/a
103	Chimney Rock Rd	Hornaday Rd	Old Oak Ridge Rd	Minor	Remove Minor
104	Burnt Poplar Rd	Swing Rd	Regional Rd	Local	Existing Minor
105	Gallimore Dairy Rd	MAB	Market St	Minor	Existing Major
106	MLK Jr Dr	Patton Ave	I-40	Freeway	Existing Major
107	Norwalk Dr	Wendover Ave	Market St	Local	Existing Minor
127	McKnight Mill Rd Ext	Hicone Rd	Eckerson Rd	Roadway Not Present	Proposed Minor
128	Washington St	Spring St	Church St	Local	Existing Minor
130	Spring Garden St	Market St	Aycock St	Major	Existing Minor
131	Rankin Mill Rd	Hicone Rd	Proposed	Local	Existing Minor
132	Florida St Ext	Clapp Farm Rd	Mt Hope Ch Rd	Local	Existing Major
133	Florida St Ext	Clapp Farm Rd	Mt Hope Ch Rd	Proposed Minor	Remove Minor
135	Steeple Chase Rd	Steeple Chase Rd	Pleasant Garden Rd	Roadway Not Present	Existing Major
136	Mt Hope Ch Rd	McPherson St	Alamance Ch Rd	Roadway Not Present	Proposed Major

*Greensboro Urban Area
2030 Long Range Transportation Plan*

ID No.	ROADWAY	FROM	TO	PREVIOUS CLASSIFICATION	PROPOSED CLASSIFICATION
136	Wade Store Rd	Alamance Ch Rd	Mt Hope Ch Rd	Roadway Not Present	Proposed Minor
137	Wade Store Rd	Alamance Ch Rd	Mt Hope Ch Rd	Local	Existing Minor
138	Eversfield Rd	US 158 Bypass	Brookbank Rd	Roadway Not Present	Proposed Minor
139	Hicone Rd	US 29	End	Local	Existing Major
140	Vandalia Rd	Vandalia Rd	US 421	Local	Existing Major
140	Lindsay St	Greene St	Eugene St	Local	Existing Minor
141	Birch Creek Rd	McLeansville Rd	Knox Rd	Local	Existing Minor
142	Bethel Ch Rd	Knox Rd	Bethel Ch Rd	Roadway Not Present	Proposed Minor

Table 5.2 — Changes to Grade Separation and Interchange Elements in the Proposed Thoroughfare Plan

ID No.	Street Name	Street Classification	Crossing	Crossing Type
3	Rudd Station Rd	Proposed Local	Railroad	Proposed Grade Separation
19	NC 150	Existing Major	Railroad	Proposed Grade Separation
108	Wagner Bend Rd	Existing Collector	Railroad	Proposed Grade Separation
109	Ward Rd	Proposed Major	Railroad	Proposed Grade Separation
110	Franklin Blvd	Existing Minor	Railroad	Proposed Grade Separation
111	English St	Minor Existing	Railroad	Proposed Grade Separation
112	Gillespie St	Existing Collector	Railroad	Proposed Grade Separation
113	Dudley St	Existing Minor	Railroad	Proposed Grade Separation
114	Gallimore-Friendly	Proposed Major	Railroad	Proposed Grade Separation
115	McLeansville Rd	Existing Major	Railroad	Proposed Grade Separation
115	Hilltop Rd	Existing Major	Railroad	Proposed Grade Separation
116	Knox Rd	Proposed Minor	Railroad	Proposed Grade Separation
116	Mackay Rd	Existing Minor	Railroad	Proposed Grade Separation
117	High Rock-Rock Creek Connector	Proposed Major	Railroad	Proposed Grade Separation
118	Regional Rd	Existing Major	Bryan Blvd	Proposed Interchange
119	Hillcroft Rd	Existing Major	Railroad	Proposed Grade Separation
120	Yanceyville St	Existing Major	Railroad	Proposed Grade Separation
121	Monnett Rd	Minor Existing	US 421	Proposed Grade Separation
122	Reedy Fork Parkway	Minor Proposed	US 29	Proposed Interchange
125	Bishop Rd Extension	Minor Proposed	Bishop Rd Ext	Proposed Grade Separation
134	Bunker Hill	Minor Existing	Railroad	Proposed Grade Separation
143	High Point Rd	Freeway Proposed	Urban Loop	Proposed Interchange
144	US 29	Freeway Existing	Reedy Fork Pkwy	Proposed Interchange
145	Chimney Rock	Existing Collector	Railroad	Proposed Grade Separation



NOTE: All Proposed New Corridor Locations Are Subject to Further Study

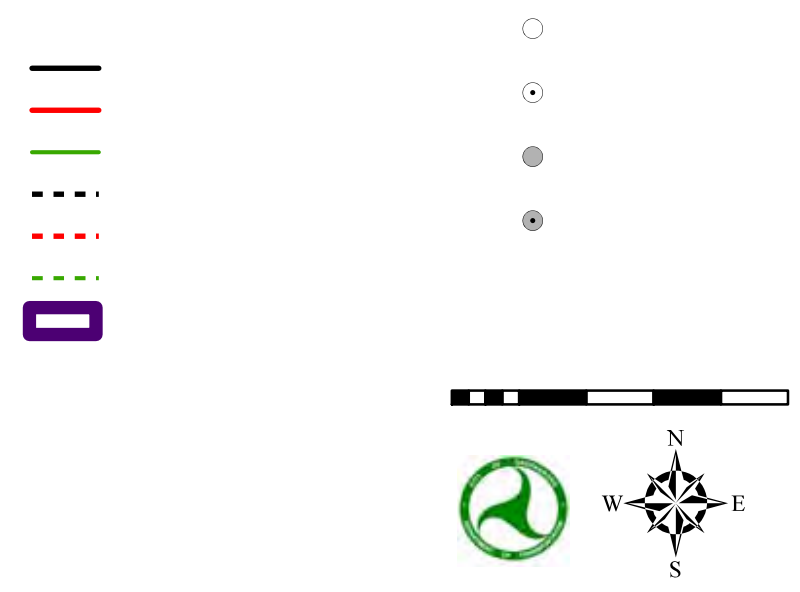
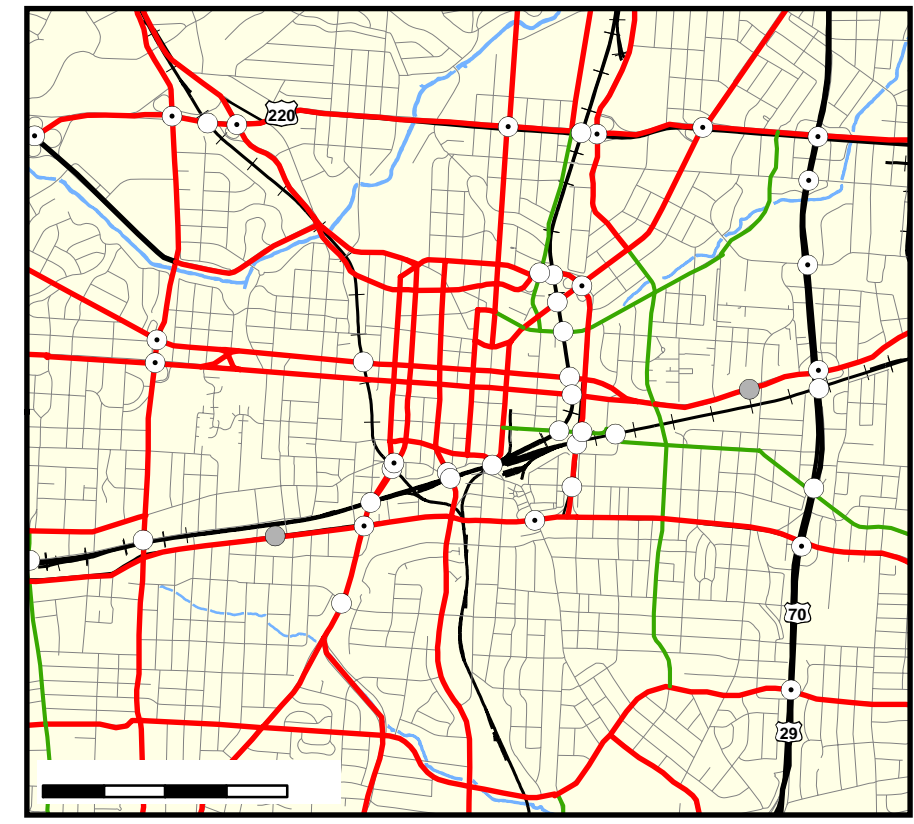
Refer to High Point Urban Area Thoroughfare Plan

Refer to Burlington-Graham Urban Area Thoroughfare Plan

Adopted by:
 Transportation Advisory Committee..... July 9, 1996
 North Carolina Department of Transportation..... February 7, 1997

Revisions	
TAC	NCDOT
10/13/97	01/08/99
03/18/98	
02/20/02	10/03/02
05/28/03	08/07/03
02/26/04	06/03/04
08/26/04	

Greensboro Urban Area
 Metropolitan Planning Organization



Collector Street Plan

The collector street planning process includes two components: the classification of existing streets as collectors; and the identification of new collector street connections. These two work tasks are complimentary, and both are key parts of the land use and transportation planning toolbox for creating more livable, functional communities.

Often collector streets are constructed over time in an uncoordinated fashion. This practice typically results in a fragmented system of streets. The development of a collector street plan allows for the orderly and incremental implementation of the collector street network. **Figure 5.1** illustrates the contrast between an interconnected network with an effective system of collector streets and a fragmented network, in which local streets access arterials directly. The resulting plan accounts for the desired level of mobility by ensuring connectivity at appropriate locations. As a result, the two greatest advantages of having a collector street plan include: 1) it assists local planning for public transportation, pedestrian and bicycle facilities, improved traffic circulation and traffic control; and 2) when linked to the Unified Development Ordinance it enables appropriate transportation facility design and improvement requirements to be fulfilled through the process of development and redevelopment.

Why Plan Collector Streets?

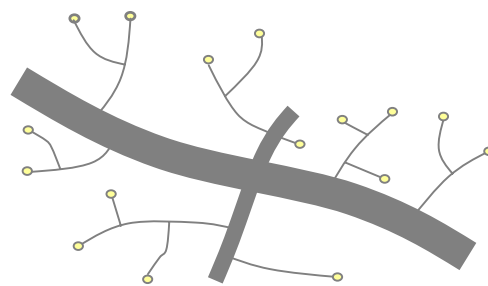
Collector streets provide critical connections throughout the overall transportation system. A brief description of the roadway network highlights the importance of this role. At the national level, interstates and major US routes provide high levels of mobility, with fully controlled access. Within North Carolina, state highways and major thoroughfares provide slightly lower mobility, which is offset by a greater, but still limited, degree of access. At the neighborhood level, local streets with narrower cross-sections and sharper turning radii, provide very limited mobility, but the highest levels of direct access to destinations.

Collector streets bridge the gap between the freeway and thoroughfare system and the local street network by providing a more even balance of mobility and access. The versatile collector street network connects the high mobility and traffic carrying capacity of interstates and thoroughfares with the accessibility of local streets. Until recently, traditional emphasis on thoroughfare

Figure 5.1—Connectivity and Collector Streets



Connected Street Network



Fragmented Street Network

planning has overshadowed the importance and benefits of a well integrated network of collector streets.

While there are potential challenges related to the implementation of a collector street plan, the benefits are numerous as identified below.

Benefits:

- More reliable and timely emergency response—a greater number of direct routes
- Better public services/utilities—interconnected service networks (that generally follow the street) contribute to even and reliable distribution
- More efficient refuse collection—less back-tracking
- Potential for congestion reduction—short trips can be made without using thoroughfares, protecting their capacity for longer trips
- Improved access—locate driveways on collectors, rather than thoroughfares
- Improved local mobility—collectors are frequently ideal corridors for pedestrians, bicyclists, and transit services
- Cost—can be shared between public and private entities, may reduce the need for costly roadway improvements
- Consistent and appropriate design—when linked to the Unified Development Ordinance design and improvement requirements can be enforced

Challenges:

- Impacted water quality—more stream crossings and potential wetland impacts
- Affected wildlife—streets can be barriers and change plant and animal spread/movement and migratory patterns
- Perception—connections may not always be viewed as needed or beneficial by those concerned
- Cost—who pays and how much is contributed by each?

Identifying the *Existing* Collector Street System

The process used by the Technical Committee in designating existing streets as collectors included a review of existing designations within the City of Greensboro, a review of land uses, a review of the degree of connectivity provided between the local and major street system, and an assessment of future development needs along existing streets. The process involved a draft prepared by the project team, review and revision by GDOT staff, and a close examination by the Technical Committee.

Identifying *Future Collector Street Connections*

The following guidelines were used in identifying the future collector street connections contained in the draft Collector Street Plan:

- Avoid steep slopes and otherwise unsuitable topography
- Minimize impact to the built environment
- Avoid FEMA designated floodplains
- Minimize the number of wetland (National Wetland Inventory) impacts
- Minimize the amount of each wetland impact (i.e., don't cross a wide wetland when a narrower one can be crossed)
- Minimize the frequency of stream crossings
- Minimize the number of high-quality (larger) stream crossings
- Minimize the length of stream crossings
- Minimize school impacts
- Minimize the number and size of each impact to other environmental features such as historic features and districts, threatened and endangered species, hazardous waste sites, and superfund sites
- Avoid impacts to parks and designated open spaces
- Minimize the number of new facilities in critical watershed areas
- Coordinate with existing and planned development patterns
- Evaluate extensions of, or connections to existing stub streets
- Develop feasible connections (A to B) between destinations
- Consider Land Use Plan goals for area development
- Consider land use potential and plan future collector connections according to established spacing guidelines (see **Figure 5.2**)

Other considerations included: previously known connection needs, collector street considerations for areas with significant near term development pressure, and coordination with the goals of area land use plans. These principles will be used in developing the set of future collector street connection needs throughout the MPO area that will be included in the final Collector Street Plan, which will serve as a supplement to the Thoroughfare Plan.

Draft Collector Street Plan

The result of this planning exercise was the development of a draft Collector Street Plan (see **Map 5.2**). The collector street planning process has identified a substantial number of new (future) and existing collector streets. The following statistics present the total mileage of the draft collector street system (existing and proposed streets):

Figure 5.2—Collector Street Spacing Guidelines



- Total collector street mileage (existing and proposed streets)—901 miles
- Existing collector street mileage (existing streets classified as collectors)—702 miles
- Future collector street mileage (proposed connections)—199 miles

The draft Collector Street Plan presented here is the first step in a process that will continue after the completion and adoption of the LRTP. The MPO will refine the Collector Street Plan through further coordination with local governments, additional opportunities for public review, the development of collector street design standards, and implementation measures. Finally, in an effort to promote the plan's implementation, the MPO will seek adoption by local governments.

Draft Goals and Implementation Policies

As work continues on the collector street plan, the following general goals and implementation measures will be considered:

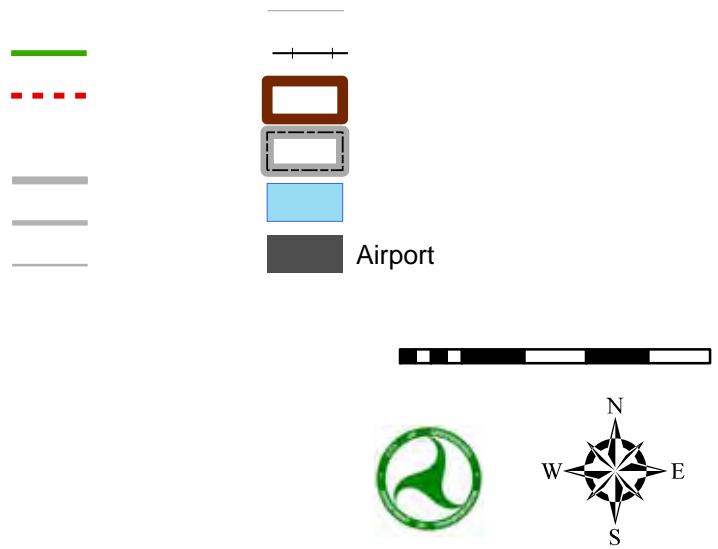
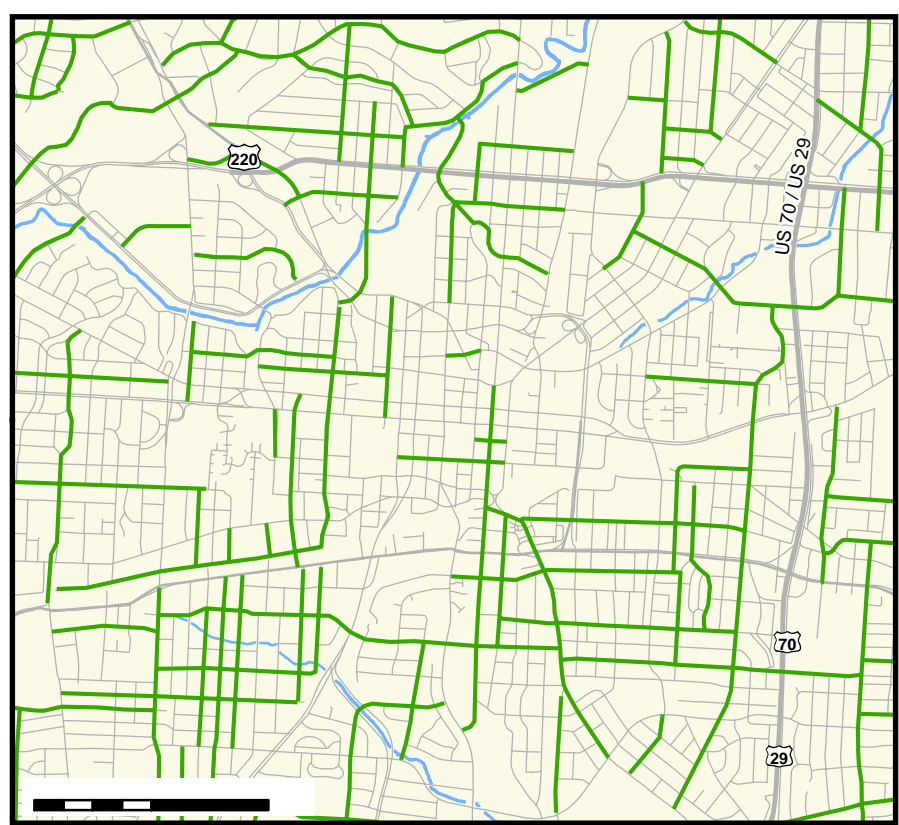
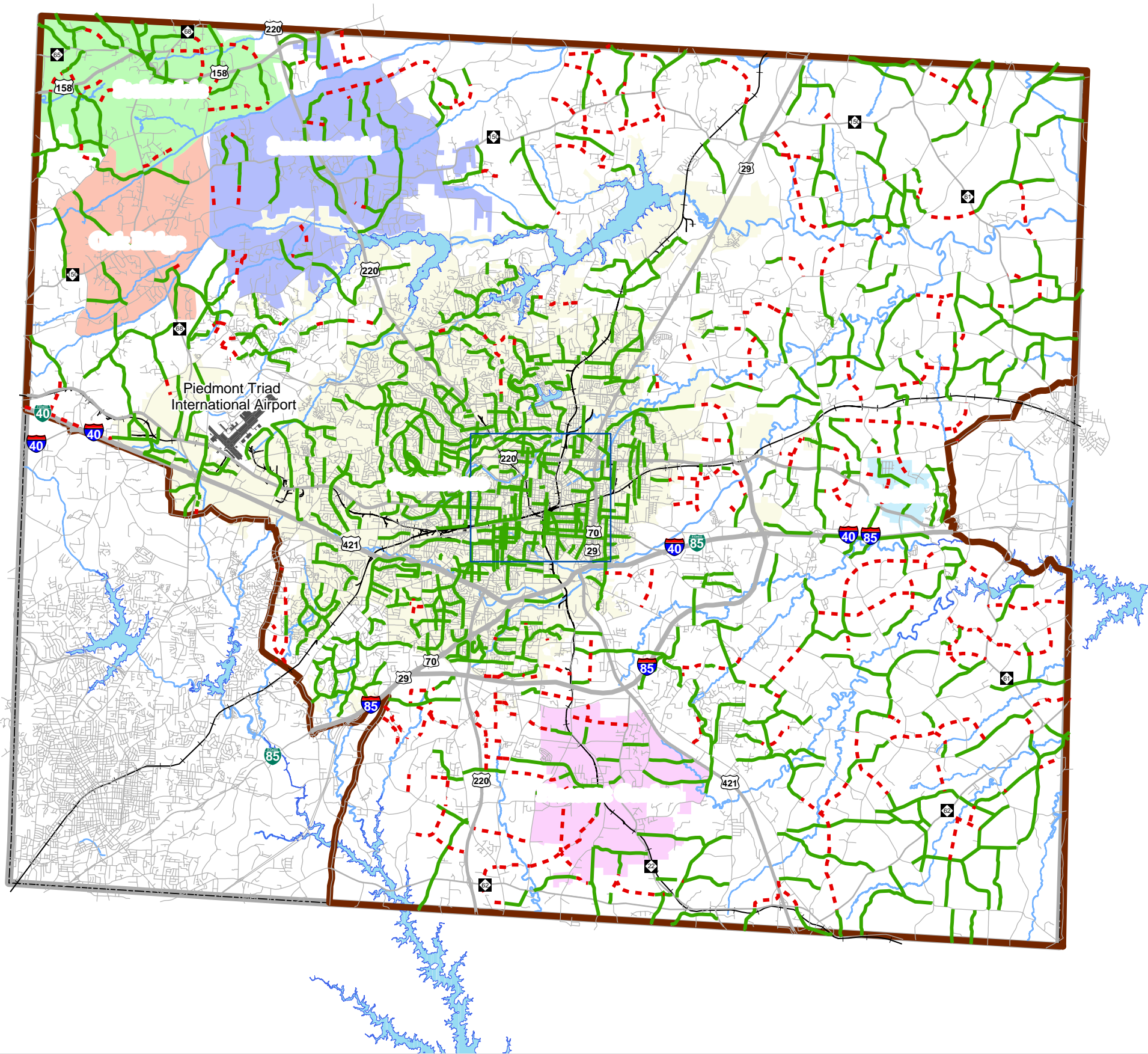
Outcome goals:

- Increase the number of collector streets to better facilitate travel between local streets and arterials through implementation of the Collector Street Plan
- Improve accessibility to higher intensity residential areas and activity centers
- Avoid and/or minimize impacts to environmentally sensitive areas to preserve the natural environment
- As the transportation system is improved and expanded, minimize impacts that negatively affect the character and integrity of neighborhoods

Implementation Policies:

- Consider the *Collector Street Plan* as a supplement to Long Range Transportation Plan
- Seek to incorporate the Collector Street Plan and associated roadway design standards and policy requirements within Unified Development Ordinances (UDO) of the County and the municipalities
- Use the plan as a tool to communicate desired roadway connectivity as development projects are proposed
- Review all development proposals for consistency with the approved collector street plan and place an emphasis on *connections between destinations, rather than on specific alignments*

- Require that new developments reserve right-of-way for, and construct, future collector streets
- Integrate future bikeway, greenway, and trail networks with the *Collector Street Plan* to improve access and enhance connectivity between systems
- Amend the *Collector Street Plan* as necessary to include new streets as they are identified during the development review process



Bicycle and Pedestrian Element

Policy: Mainstreaming Nonmotorized Transportation

Improving conditions and safety for bicycling and walking embodies the spirit and intent of ISTEA and TEA-21 (Federal Legislation for surface Transportation) to create an integrated, intermodal transportation system that provides travelers with a real choice of transportation modes. State and local agencies are challenged to work together cooperatively with transportation providers, user groups, and the public to develop plans, programs, and projects which reflect this vision.

Bicyclists and pedestrians need to have safe, convenient access to the transportation system. Every transportation improvement is an opportunity to enhance the two modes. Bicyclists and pedestrians are included as a matter of routine in the planning, design, and operation of transportation facilities. The decision to not accommodate them is the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access either by prohibition or by highway designs that are incompatible with safe, convenient walking and bicycling. Exceptional circumstances include controlled access highways and projects where the cost of accommodating bicyclists and pedestrians is high in relation to the overall project costs and likely level of use by nonmotorized travelers.

Bicyclists and pedestrians have the same origins and destinations as other transportation system users and it is important for them to have safe and convenient access to airports, transit, and other intermodal facilities as well as to jobs, schools, services, recreation facilities, and neighborhoods. This Plan places a strong emphasis on creating a seamless transportation system that all users can enjoy and use efficiently and safely.

Incidental Projects

There are many simple and cost-effective ways to integrate nonmotorized users into the design and operation of our transportation system by including bicycle and pedestrian accommodation as an incidental part of larger ongoing projects. Examples include:

- paved shoulders on new and reconstructed roads
- restriping roads (either as a stand-alone project or after a resurfacing or reconstruction project) to create a wider outside lane or striped bike lanes



Spring Garden Street with new streetscape that includes bike lanes and wider sidewalk

- building sidewalks and trails, and marking crosswalks or on-street bike lanes as a part of new highways, and requiring new transit vehicles to have bicycle racks and/or hooks already installed.

There are usually a number of good reasons for doing these things without specific reference to bicycle and pedestrian access -- shoulders are good for motorist safety as well as providing bicyclists a place to ride -- and the broad eligibility of bicycle and pedestrian facilities in all the major TEA-21 funding programs means that incidental improvements such as these are appropriate to be included as part of larger transportation projects.

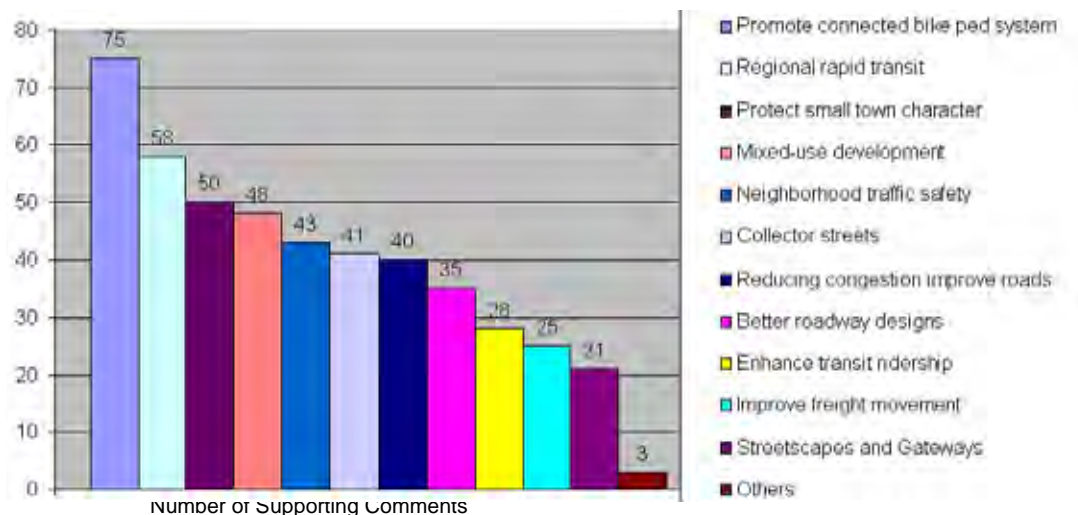
Public Participation

Bicycle and pedestrian planning is a high priority for the community and is evidenced by the recommendations stated in the Greensboro Comprehensive Plan and Guilford County Area plans.

Public involvement workshop participants voiced a high level of support for additional pedestrian and bicycle amenities.

Figure 6.1 depicts the results from an exercise intended to raise awareness for priority topics of the plan. Participants identified bicycle and pedestrian accommodations as one of the highest priorities for the urban area during the first of three workshops. Likewise, results from a statistically valid phone survey concluded that 76% of Greensboro City residents and 66% of Guilford County residents thought that providing pedestrian accommodations was important.

Figure 6.1 — Public Involvement: Priority LRTP Topics



Greensboro Walkability Policy

In March 2002, the Greensboro City Council passed a resolution expressing their commitment to making Greensboro a walkable community by expanding sidewalk facilities and improving pedestrian safety. The resolution is referred to as the Greensboro Walkability Policy and clearly establishes the goal of creating a more walkable Greensboro through the following actions:

- An ongoing City sidewalk construction program targeted to community and transportation system needs, including improving safety and access to needed services and destinations
- An ongoing City effort to respond to pedestrian safety, mobility, and access issues through the use of other warranted pedestrian facility improvements, education, and other strategies
- Ordinance requirements for development and redevelopment that require sidewalk construction to meet pedestrian safety and access needs and further the City's sidewalk connectivity goals

Existing Conditions and Future Projects

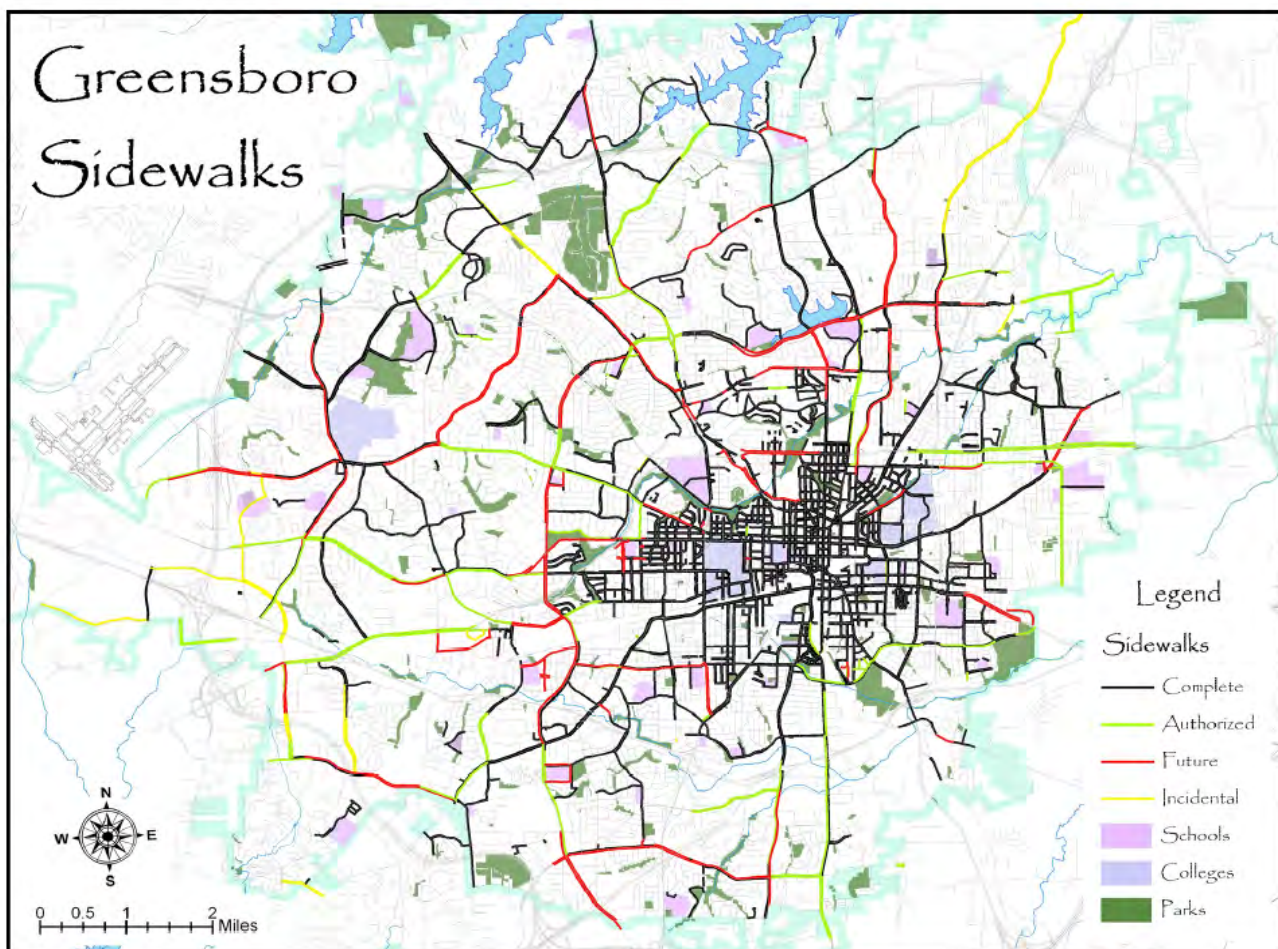
Greensboro has more than 450 miles of public sidewalks.

Map 6.1 depicts the City's sidewalk network and current sidewalk projects. Like many growing communities, the majority of existing sidewalks are located downtown and in the older neighborhoods. Development in the last half of the twentieth century rarely included adequate pedestrian facilities.

The City of Greensboro has initiated an aggressive sidewalk construction program in an effort to infill high priority locations. At an investment rate of \$2 million per year, the City's current sidewalk projects will add 12.7 miles of new sidewalks by July 2005. The City currently has 35 miles of independent sidewalk projects at various stages of design, right-of-way, and construction. An additional 31 miles of roadway projects with sidewalks are currently in various stages of design, right-of-way, and construction. **Map 6.1** shows all existing and currently authorized sidewalk projects in Greensboro and identifies additional mid-term sidewalk construction priorities identified through the Greensboro Sidewalk Prioritization model. This model features a GIS-based software program that supports the development of future priorities targeted to high need locations.



Greensboro has undertaken an aggressive sidewalk construction program



Map 6.1 — Existing and Planned Sidewalks

Pedestrian Safety

In October 2002, the City of Greensboro initiated a pedestrian safety study. Given the concern over the number and frequency of pedestrian crashes in the City of Greensboro, it was determined that an analysis of pedestrian crashes would be an important step toward improving pedestrian safety and the walkability of the community.

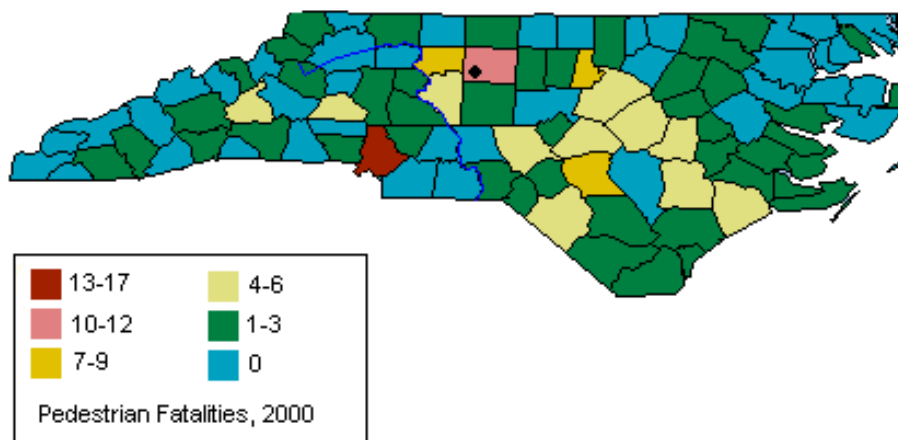
The study documented an analysis of pedestrian safety within the City of Greensboro. The analysis was based on vehicular crashes reports involving pedestrians. In an effort to better understand the variables associated with pedestrian crashes, a database that inventories information such as location, conditions, driver, and pedestrian characteristics as well as other related elements was created. The report notes that between 1997 and 2001, more than 550 reported crashes involving pedestrians occurred within the

"...between 1997 and 2001, there were over 550 reported accidents involving pedestrians within the City Limits of Greensboro."

-Source: 2002 Greensboro Pedestrian Safety Study



City limits of Greensboro; 23 of these crashes resulted in a pedestrian fatality. At 2.35 pedestrian fatalities per 100,000 people, Guilford County (the third largest county by population) has the second highest fatality rate in North Carolina. **Figure 6.2** depicts the 2000 NC pedestrian fatality rates by county.



**Figure 6.2 — 2000 NC
Pedestrian Accident Rates**

A summary of the findings for the City of Greensboro contained within this report is as follows:

- There were 556 crashes involving pedestrians, 23 resulted in fatalities
- The pedestrian was partially at fault 9.7% of the time
- The motorist was partially at fault 13.3% of the time
- 15.6% of pedestrians in crashes were impaired from drugs, alcohol, or medicine
- 4.5% of motorists were known to be impaired by medicine, alcohol, or drugs
- 18.3% of the crashes resulted in fatal or incapacitating injury
- 57.4% of crashes were in the daylight
- 74.8% of crashes were on a 2-lane, undivided, two-way road
- Traffic control (e.g., traffic signal or STOP sign) was present at 25.2% of crashes
- Only 1.59% of juvenile crashes involved play vehicles (e.g., scooters, skateboards, etc.)

The analysis contained in the study also concluded that the majority of crashes involving pedestrians occurred on thoroughfares. This is in large part due to increased speeds, numerous driveway cuts, and a lack of pedestrian facilities.

Generally, the analysis concluded the location where crashes were most likely to occur and under what conditions. **Table 6.1** inventories those streets with the greatest frequency of pedestrian

crashes. The breakdown of pedestrian crashes by facility type is as follows:

- Thoroughfares: 61%
- Collector Streets: 17%
- Local Streets: 14%

The report concludes with a set of action items including the strengthening of existing ordinances, public awareness campaign, and expansion of the existing sidewalk network.

Greensboro Sidewalk Ordinance

In January 2003 an updated sidewalk ordinance went into effect for the City of Greensboro. The new ordinance essentially requires the construction of sidewalks:

- Along both sides of all major and minor thoroughfares, unless exempt
- Along one side of all collector and sub-collector public streets, unless both sides are warranted by proximity to a pedestrian destination or a pedestrian safety hazard, or unless exempt
- Along one side of all local public streets, unless exempt

The Town of Summerfield also has adopted a pedestrian overlay district for their downtown and continues to require the installation of pedestrian facilities during the development review process.

Safety Program

As a part of their annual safety program, the Greensboro Department of Transportation (GDOT) has begun a review of these past accidents involving pedestrians. Review of historic crash data will identify streets and locations that have numerous pedestrian accidents. Once these locations are identified, a field investigation will be conducted and possible improvements will be implemented. These improvements may include enhanced crosswalk markings and signs, refuge islands, 'In-Street Pedestrian Crossing' signs and/or rumble strips and traffic calming measures. These improvements will help to increase driver's awareness of pedestrian crossings.

Table 6.1 — Most Common Roads for Pedestrian Crashes

Name	Frequency
Market St.	13
Eugene St.	10
Lee St.	10
Florida St.	9
Wendover Ave.	9
Friendly Ave.	8
Walker Ave.	7
Whittington St.	7
Bessemer Ave.	6
Elm - Eugene St.	6
Elm St.	6
High Point Rd.	6
Randleman Rd.	6
Spring Garden St.	6
Battleground Ave.	5
English St.	5
Gillespie St.	5
Holden Rd.	5
Washington St.	5
Willow Rd.	5
16th St.	4
Circle Dr.	4
Cone Blvd.	4
Luray Dr.	4
MLK Jr. Blvd.	4
Sullivan St.	4
Vanstory St.	4

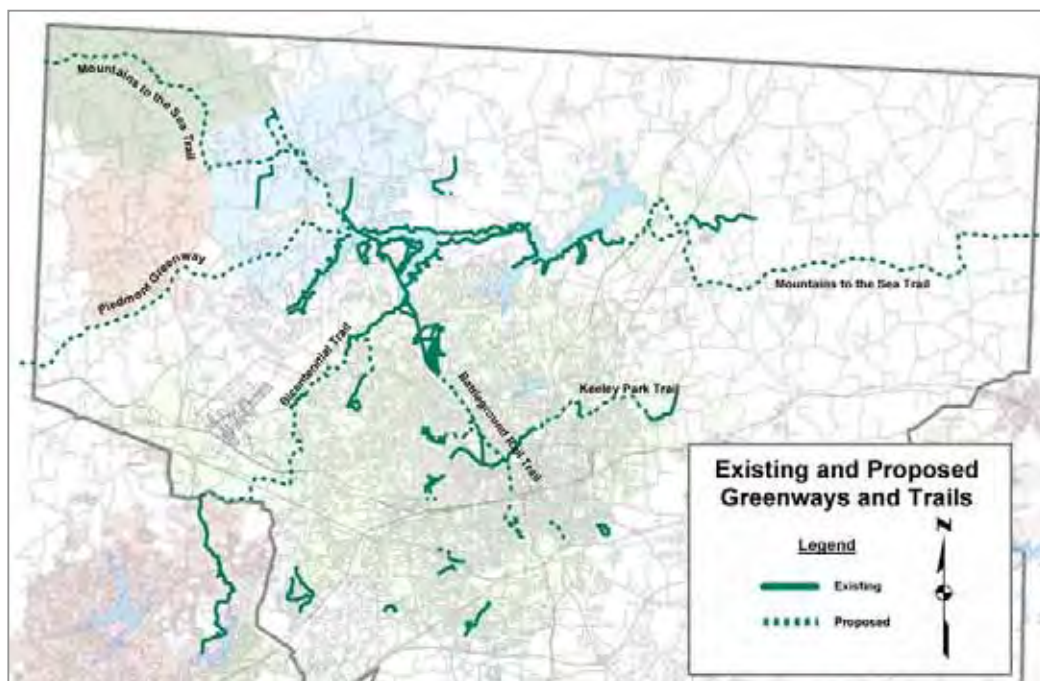


Bicycling and Greenway Trails

Round 1 workshop participants indicated the provision of cycling accommodations as one of the highest priorities. We heard from a diverse set of cycling interests, including transportation cyclists, recreational bike club riders, to occasional cyclists who ride mainly on local streets and trails. Many participants cited the lack of bike lanes or wide outside shoulders as one of the reasons they do not ride bikes more frequently. Concerns about safety were regularly mentioned as another reason more people do not choose to bike for recreation or as a transportation alternative. The only marked bike lanes within the planning area are located on a short section of Spring Garden Street through the University of North Carolina at Greensboro campus. The area currently lacks a systematic plan for the provision of on-street cycling accommodations, and the development of one is a key plan recommendation.

The area has a bicycle route system (based on loops) within the City that traverses mainly local and collector streets and connects to various trails and parks. This system will be updated and connected to routes outside of the City as a part of future bicycle planning work. There are also a number of shared-use paths in the area. The Bicentennial Greenway was begun in 1989 to commemorate the bicentennial of the U.S. Constitution. This 16-mile-long trail will create a nonmotorized connection between High Point City Lake and the Guilford Courthouse National Military Park when completed 2006. **Map 6.2** represents the current and planned greenways within Guilford County.

Bicentennial Greenway is projected to be complete in 2006



**Map 6.2 —
Existing and
Proposed Greenway
Trails**

Battleground Rail-Trail

The Battleground Rail-Trail will be a shared-use path approximately 2.62 miles long from the northwest side of Greensboro to the downtown. It will provide an appealing alternative means of transportation for many residents to avoid an area of significant development and traffic congestion. It will also connect to a growing regional trail system in the Triad. Phase I of the trail will roughly follow an abandoned railroad right-of-way between Pisgah Church Road and Markland Drive. An underpass will be constructed at Cone Blvd. to enhance the safety of trail users. Phase II of the project will continue south into the downtown area along the rail bed.

Bicycle and Pedestrian Element of LRTP

The recommended investments for the bicycle and pedestrian element are based on two factors:

- The current construction programs of the City of Greensboro, Guilford County, and the NCDOT
- Estimates of future funding levels

A key finding of the transportation plan update has been that widespread and deep support exists for improvements to the pedestrian and bicycle facility infrastructure throughout the MPO area. It is anticipated that more extensive improvements will be needed by 2030, but additional, more detailed work will be needed to develop a long-term plan of action. At present, the plan assumes that by 2030, roughly 107 miles of new trails and 400 miles of sidewalks are assumed to be opened as a result of the investments noted in the plan. Complete financial analysis can be found in chapter 12.

Table 6.2 — Projected Expenditures (millions)

Trails	Sidewalks	Total
\$55.7	\$58.8	\$114.5

Bicycle and Pedestrian Investments in the 2030 Transportation Plan

The transportation plan assumes the continuation of an aggressive program by the City of Greensboro to retrofit existing roadways with sidewalks. Targeted streets include thoroughfares, bus routes, high volume/speed and accident locations. Other considerations include proximity to apartments, schools, hospitals, offices, shopping, restaurants, parks, government buildings and other public spaces. The plan assumes continuation of the City's sidewalk petition program on residential streets and neighborhoods. The transportation plan also assumes sidewalks are included in all City of Greensboro roadway projects, as well as

in NCDOT roadway improvement projects in urban and most urbanizing areas.

Finally, the transportation plan also assumes continued implementation of the City and County Trail System. These include the extension of the Battleground Rail-Trail into downtown Greensboro, and completion of the Piedmont Greenway from Winston-Salem to Greensboro through northwest Guilford County.

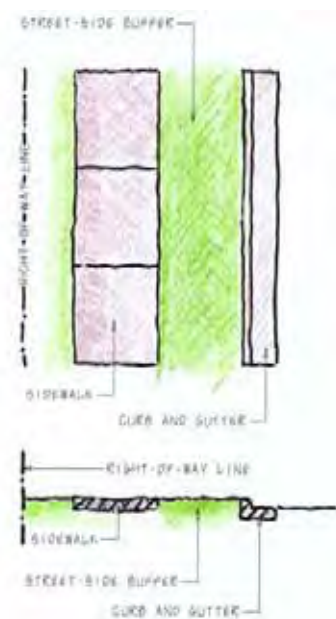
Bicycle accommodations (bike lanes or wide outside shoulders) are currently planned for some of the LRTP roadway projects. These costs are factored into roadway project costs and are not reflected in **Table 6.2**, which presents projected stand-alone sidewalk and trail expenditures. More detailed work will be needed, however, to develop a long-term strategy for meeting area on-street bicycle facility needs. The MPO plans to conduct a Bicycle Accommodations Study and Plan in 2004-2005 to develop a long term implementation plan.

Summary Recommendations

The following recommendations are a set of action items that reinforce the MPO's commitment to walkability and safe bicycling:

- Implement recommendations of Greensboro Pedestrian Safety Study
- Continued expansion and infill of the sidewalk network, focusing on high priority links, ADA compliance ramps, as well as removal of obstructions
- Include sidewalks (*and bike lanes where appropriate*) in all new roadway projects
- Improve pedestrian crossing conditions through expanded pedestrian signals and high-visibility crosswalks at high volume locations
- Cooperate with local partners (Greensboro, Guilford County, High Point, Winston-Salem and surrounding towns) on the development of a Greenway Master Plan that expands the use of shared-use paths throughout the Triad
- Perform a detailed Bicycle Accommodation Study evaluating the use of on-street and off-street bicycle accommodations within the urban area that prioritizes future cycling infrastructure needs
- Develop an updated bicycle route map for the urban area

Basic sidewalk anatomy



Transit Element

Introduction

Public transportation is a vital element of the total transportation services provided within a metropolitan area. Not only does public transportation provide options to senior citizens, those without vehicles, and those who are physically or economically disadvantaged, but it also is an efficient, low cost, high capacity means of moving people through a densely traveled corridor. The ability to provide a transportation alternative for those who live in high density areas is as important as for those living in low density or rural areas. The planning area for this report is served by several transportation systems.

Existing Services

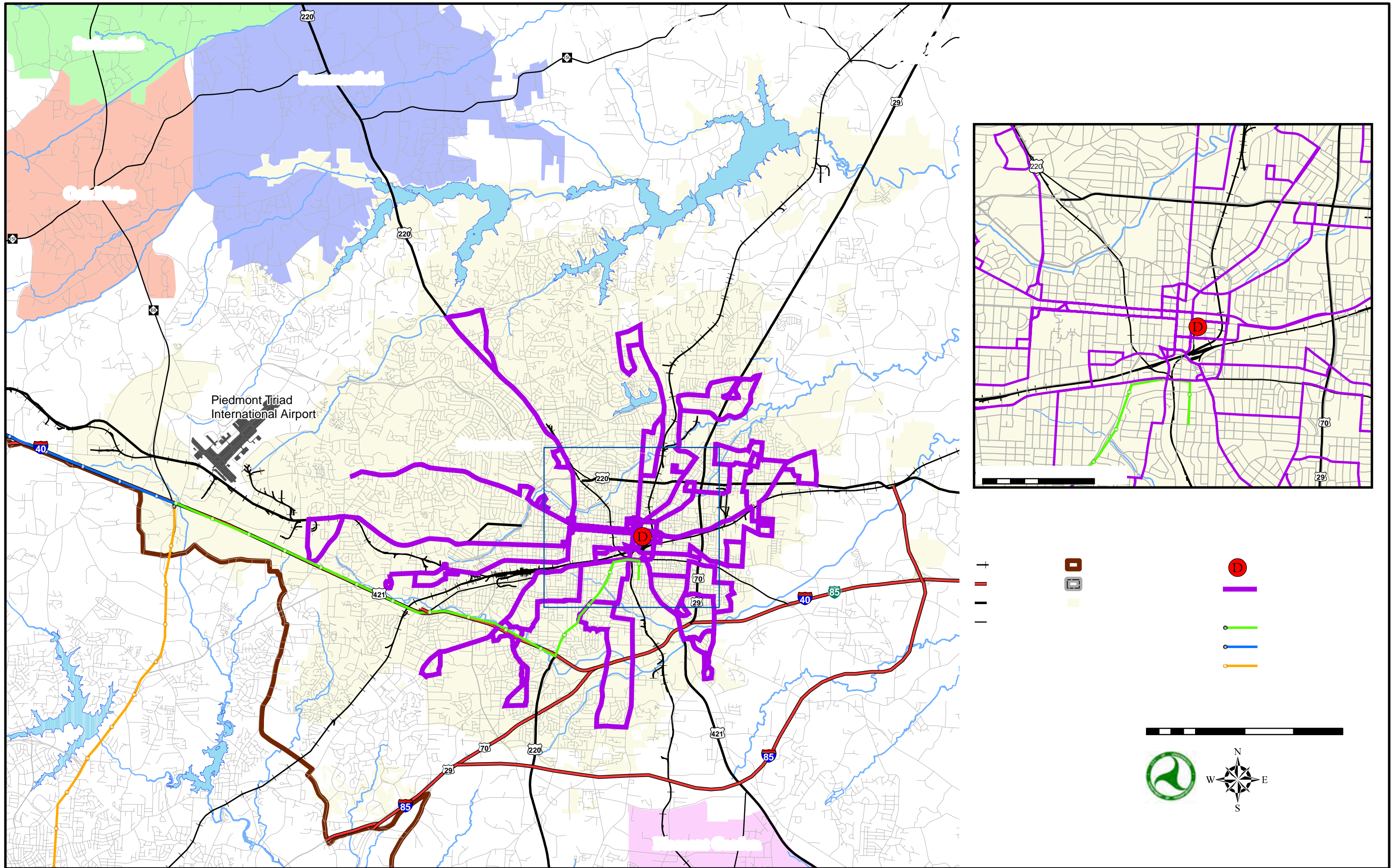
The Piedmont area has three municipally-funded and operated transit systems. Greensboro, High Point, and Winston-Salem all have publicly-funded transit systems in operation. In addition to the publicly-funded transit authorities, a regional transit authority also is in place for the planning area. The Piedmont Authority for Regional Transportation (PART) began operations in 1997 with the intent of improving transportation alternatives regionally. **Map 7.1** shows existing service.

Greensboro Transit Authority

The Greensboro Transit Authority (GTA) began operations in 1991 after it assumed control of the local transit services from Duke Power's Transit division. At that time, GTA revised routes, updated service, and replaced the existing fleet of vehicles.

Currently, GTA operates 14 fixed routes, radiating from a central transfer station. GTA's central hub is the J. Douglas Galyon Depot, a multimodal transportation center, which was formerly Greensboro's Norfolk Southern Railway station. The Depot currently houses GTA operations as well as Greyhound/Trailways Charter Bus services. Amtrak has future plans to relocate its passenger rail operations to the Depot upon completion of track and station improvements in 2006, which are currently under way.

GTA operations include a fleet of 32 large buses and 28 small buses. The large buses serve 14 daytime bus routes (weekday and Saturday service), 7 Sunday routes, and 7 evening routes. The small buses serve 4 fixed connector routes, shuttle services around the Starmount and Irving Park areas, and a shared ride service



known as Specialized Community Area Transportation (SCAT). SCAT is a shared-ride transportation service for users with disabilities or other conditions which prevent them from accessing the standard fixed-route transit system.

Piedmont Authority for Regional Transportation

Established in 1997, the Piedmont Authority for Regional Transportation is a regional partnership among four MPOs and several local governments within Alamance, Davidson, Forsyth, Guilford, Randolph, and Rockingham counties. PART's work program includes two key emphasis areas: to plan for and operate a regional public transportation system; and to serve as a forum for cooperative regional transportation planning. PART's mission is to enhance the quality of all forms of transportation through efficient use and protection of natural, economic, and human resources.

PART's fleet includes 12 mid-size buses and 72 vans. The PART Express bus service operates between the downtown areas of Greensboro, High Point, and Winston-Salem. PART Express provides a 30 minute peak hour service and a 60 minute off-peak hour service between the downtowns. The Express service is centralized at the new PART Regional Hub located near the intersection of Regional Road and Albert Pick Road. Fares are \$2 each way.

The PART Shuttle service provides a direct connection between employment centers in and around the airport as well as a direct connection to the airport. PART operates the Piedmont Triad International Airport (PTIA) shuttle, while GTA subsidizes and operates the Piedmont Center shuttle, the Pleasant Ridge shuttle, and the Burnt Poplar shuttle. All of the shuttle services are free.

PART also operates a ridesharing and vanpooling program as well as the PART Connections service, which provides multi-county, non-emergency transportation to the hospitals at UNC-Chapel Hill, and Duke University. Fares are \$20 each way for the general public or free for clients of Guilford County Transportation Services.

Guilford County

Along with providing support services for SCAT, Guilford County also provides non-ADA (Americans with Disability Act) subscription and dial-a-ride services for residents of Guilford County, not living inside the City of Greensboro. Service is available weekdays and Saturdays, and fares are \$1.60 each way.

Amtrak

America's railroads provide an important alternative to auto and air transport for both passengers and freight. As the Nation's largest provider of passenger rail service, Amtrak serves 500 stations in 46 states, operating 425 locomotives and 2,141 railroad cars. Amtrak's Pomona Station in Greensboro is one of the busiest in North Carolina. Amtrak will relocate its passenger rail operations to the J. Douglas Galyon Depot upon completion of track and station improvements in 2006, which are currently under way. The MPO works with the NCDOT Rail Division to plan for future services that will meet growing passenger rail transportation needs.

Three passenger trains serve Greensboro twice daily: the Carolinian, the Crescent, and the Piedmont. The Carolinian runs from Charlotte to New York, the Crescent runs from Atlanta to Washington, DC, and the Piedmont runs from Charlotte to Raleigh. Connecting service at Pomona Station is available via GTA, taxi, and rental car. Fares vary substantially by route, destination, and time of year, but are generally cost-competitive when compared with auto or air travel.

Improving travel time

To reduce travel time for both freight and passenger trains along the existing passenger rail corridor, the NCDOT Rail Division has partnered with the North Carolina Railroad (NCRR) and Norfolk Southern (N-S) to improve the busy rail corridor connecting Greensboro with Raleigh and Charlotte. Construction began in summer 2002 to modify portions of track and install a new train control system. Work is scheduled to be completed in 2004. These track improvements are expected to reduce the travel time between Raleigh and Greensboro by approximately 20 minutes.

Safety

In an effort to improve the safety of rail crossings in the rail corridor from Raleigh, through Greensboro to Charlotte, the NCDOT Rail Division and N-S have initiated the Sealed Corridor Project. This project involves various types of improvements to the 209 public rail crossings in the corridor, including: installation of median separators, longer gate arms, four-quadrant gates, modernized warning devices, and "health monitoring" devices, as well as crossing closures and roadway re-alignments.

Implementing high-speed rail

The proposed Southeast High-Speed Rail (SEHSR) project would provide passenger rail service between Washington, D.C. and Charlotte, NC at a maximum speed of 110 mph. Service eventually may extend to South Carolina, Georgia and Florida. In October 2002, the Federal Railroad Administration and Federal Highway

Administration confirmed and approved the preferred SEHSR corridor. North Carolina is currently conducting the Tier II Environmental Study to identify the next steps necessary to develop high-speed rail along its portion of the corridor. The track and crossing improvements described previously will greatly facilitate implementation of the SEHSR project. The SEHSR system is anticipated to be operational by 2010.

Planning for the Future

The recommended investments in the public transportation element are based on 1) the Greensboro Transit Authority's recently adopted Mobility Greensboro Long Range Public Transportation Plan; and 2) the regional public transportation services and plans of the Piedmont Authority for Regional Transportation (PART). Total public transportation investments are expected to exceed \$677 million through 2030. Operating and maintenance costs (O&M) are expected to represent a majority of the costs as illustrated in **Table 7.1**. **Map 7.2** illustrates GTA and PART planned services.

Table 7.1 — Transit Costs and Revenues

Transit Costs and Revenues (in thousands of dollars)					
Period	Costs			Revenues	Difference
	O&M	Capital	Total	Total	
2004	9,873	6,649	16,522	16,530	8
2005-2014	124,230	88,266	212,496	212,520	24
2015-2020	143,214	36,209	179,423	179,560	137
2021-2030	255,196	13,665	268,861	280,970	12,109
Totals	\$532,513	\$144,789	\$677,302	\$689,580	\$12,278

Mobility Greensboro Long Range Public Transportation Plan

In August 2002, GTA initiated a long range planning process to establish a vision for the future of public transportation in Greensboro. The Mobility Greensboro Long Range Public Transportation Plan expresses a comprehensive vision for public transportation and enhances the understanding of the future role of public transportation in the City of Greensboro. The final Mobility Greensboro Report can be accessed on the internet at:

http://www.ci.greensboro.nc.us/gdot/public_trans/mobility/final_plan.htm

